

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-011180**Date Inspected:** 05-Jan-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Chen Ying Xin, Tu Jun**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Umesh Gaikwad was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

**BAY 10 NORTH TOWER LIFT 2 PADEYE OF SKIN E**

This QA inspector performed Magnetic Particle Testing (MT) of approximately 15% and random Visual Testing (VT) of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an MT report for this date. The members are identified as Tower Components. The weld designations reviewed are as follows.

NSD1-SA61A/G-20 GREEN TAG NO. 8378R1

**BAY 11 TOWER STRUT**

This QA inspector performed Magnetic Particle Testing (MT) of approximately 15% and random Visual Testing (VT) of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an MT report for this date. The members are identified as Tower Components. The weld designations reviewed are as follows.

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SD1-STSA3-1-99M-1-9, 10, 11, 12, 25, 26, 29, 40, 22, 24, 44

SD1-STSA3-1-99M-1-32 (Approx 10mm in length MT linear indication transverse to weld axis observed)

This Quality Assurance (QA) Inspector observed the following work in progress:

Bay 10

### TOWER STRUT REPAIR

SMAW welding of weld joint 64A/B (Repair) located on ED1-STSA3-2-89M-2.

Welder is identified as 040582. ZPMC CWI is identified as Mr. Chen Ying Xin.

The welding variables recorded by QC appeared to comply with WPS-485-SMAW-2G(2F)-FCM-REPAIR-1.

### NORTH TOWER LIFT 5 BEARING PLATE REPAIR

SMAW welding of weld joint 1A/B (Repair) located on ND1-BPSA5-2-1.

Welder is identified as 052930. ZPMC QC is identified as Jiang La Mei.

The welding variables recorded by QC appeared to comply with WPS-485-SMAW-2G(2F)-REPAIR.

### SOUTH TOWER LIFT 4 CORNER DIAGONAL PLATE TO SKIN

FCAW welding of weld joint 49 located on SSTL4-1B/L.

Welder is identified as 040533. ZPMC CWI is identified as Mr. Gong Liang Zhu.

The welding variables recorded by QC appeared to comply with WPS-B-T-2331-Tc-P4-F-2.

FCAW welding of weld joint 53 located on SSTL4-1B/L.

Welder is identified as 057266. ZPMC CWI is identified as Mr. Gong Liang Zhu.

The welding variables recorded by QC appeared to comply with WPS-B-T-2332-Tc-P4-F-2.

### EAST TOWER LIFT 4 CORNER DIAGONAL PLATE TO SKIN

FCAW welding of weld joint 22 located on ESTL4-2B/L.

Welder is identified as 048810. ZPMC CWI is identified as Mr. Liu Zhong An.

The welding variables recorded by QC appeared to comply with WPS-B-T-2331-Tc-P4-F.

FCAW welding of weld joint 16 located on ESTL4-2B/L.

Welder is identified as 049220. ZPMC CWI is identified as Mr. Liu Zhong An.

The welding variables recorded by QC appeared to comply with WPS-B-T-2332-Tc-P4-F.

During the Quality Assurance Magnetic Particle Testing (MT) review of welds located on Tower Strut plate SD1-STSA3-1-99M-1, this Quality Assurance (QA) Inspector discovered one (1) linear indication transverse to the weld axis measuring approximately 10mm in length. The weld is identified as: SD1-STSA3-1-99M-1-32. The Weld is a fillet weld joining the stiffener to the web plate. The material is identified as SPCM. The member is located in Bay 11. The Notice of Witness Inspection Number (NWIT) is 004999. The indication is located inside the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform one hundred (100) percent MT inspection of this weld. This issue has an incident report. The attached photographs provide additional detail.

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Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



### Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Serge Sinevod 134-8257-0045, who represents the Office of Structural Materials for your project.

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**Inspected By:** Gaikwad,Umesh

Quality Assurance Inspector

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**Reviewed By:** Clifford,William

QA Reviewer